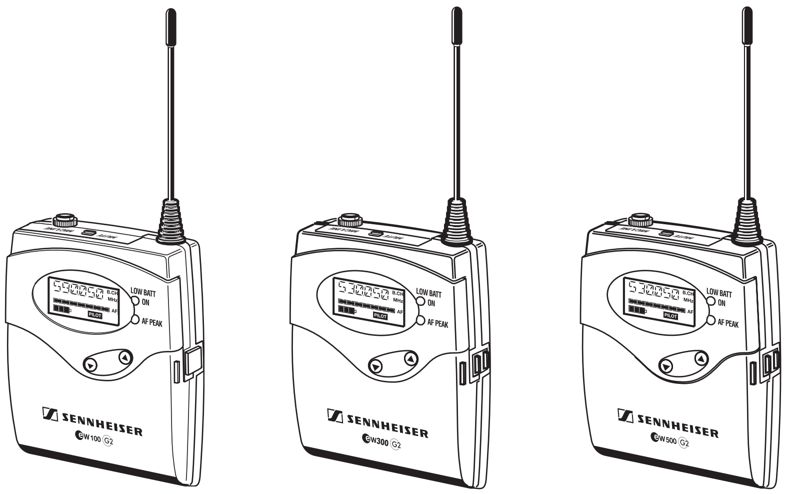
Service manual

SK 100 G2
SK 300 G2
SK 500 G2

SA 280205



Short description

The SK x00 G2 bodypack transmitter has 8 channel banks with up to 20 preset channels (presets) and one freely adjustable frequency bank. With a switching bandwidth of 36MHz 1440 frequencies can be selected in the UHF band.

Features

- Pilot tone squelch for interference-free operation
- Mute function
- HDX compander system
- Charging contacts integrated in transmitter (does not apply to SK 100 G2)
- Backlighting of display with one keystroke
- Battery status display
- Robust metal housing
- Key-lock function

SENNHEISER
Sennheiser electronic GmbH & Co. KG • 30900 Wedemark
Phone: +49 (5130) 600 0 • Fax: +49 (5130) 600 300

Safety requirements

Observe safety regulations.

Observe ESD instructions while handling electrostatically endangered components.

Only skilled persons are allowed to alter and repair. For repairs and exchanges only approved components according to the current spare parts list are allowed.

For safety and certification reasons it is forbidden to alter the product without authorisation. Otherwise, the person who has altered the product is liable for any consequential damage.

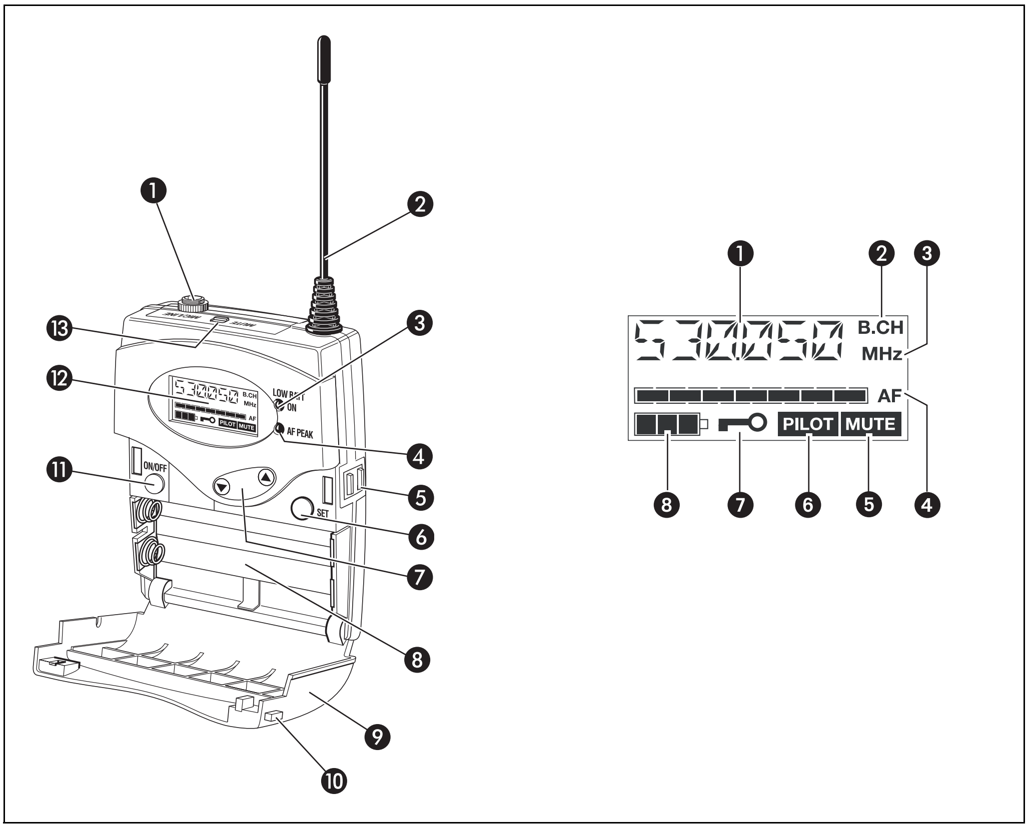
repairs/exchanges

The following instructions for overhaul and testing must be followed.
In case of unusual problems please contact your Sennheiser distributor.

For safety reasons unauthorised modifications and changes are not permitted.

Content

1 Controls and indicators



Transmitter elements

❶ Microphone and line input (MIC/LINE)

❷ Antenna

❸ Operation and battery status indication, red LED (ON/LOW BAT)

❹ Audio peak indication, yellow LED (AF PEAK)

❺ Charging contacts (not SK 100 G2)

❻ SET button (also save function)

❼ ▲/▼ rocker button (UP/DOWN)

❽ Battery compartment

❾ Battery compartment cover

❿ Unlocking button

⓫ ON/OFF button

⓬ LC display

⓭ MUTE switch

Display elements

❶ Alphanumeric display of the transmit frequency

❷ Symbol for channel bank and channel number

❸ Frequency unit

❹ 7-step level display for audio signal „AF“

❺ „MUTE“ display (audio input is muted)

❻ „PILOT“ display (pilot tone transmission is activated)

❼ Lock mode icon (lock mode is activated)

❽ 4-step battery status display

2 Technical data

2.1 General

Power supply voltage	2 batteries, type mignon AA; 1.5V or battery pack BA 2015; 2.4V
Nominal voltage	$+2.4V_{DC}$
Operating voltage	$+1.8V_{DC}$ to $+3.1V_{DC}$
Switch-off threshold	
when powered by batteries	$+1.8V_{DC}$
when powered by BA 2015 accupack	$+2.0V_{DC}$
Switch-on threshold	$+2.2V_{DC}$
Current consumption	
at nominal voltage	≤170mA
with transmitter switched off	≤250µA
Operating time	
when powered by batteries or accupack	≥8 hours
Battery status indication	100%, 70%, 30%, low battery
Programming interface	integrated infrared interface
Temperature range	-10°C to +55°C
Dimensions in mm	82 x 63 x 23
Weight incl. batteries	approx. 200g
Compliant with	
Europe	CE 0682
USA	FCC ID: DMOB2EUVL
Canada	IC: 2099A-G2SK
Japan	R202Y2378511; R202Y2378512; R202B2378531; R202B2378532

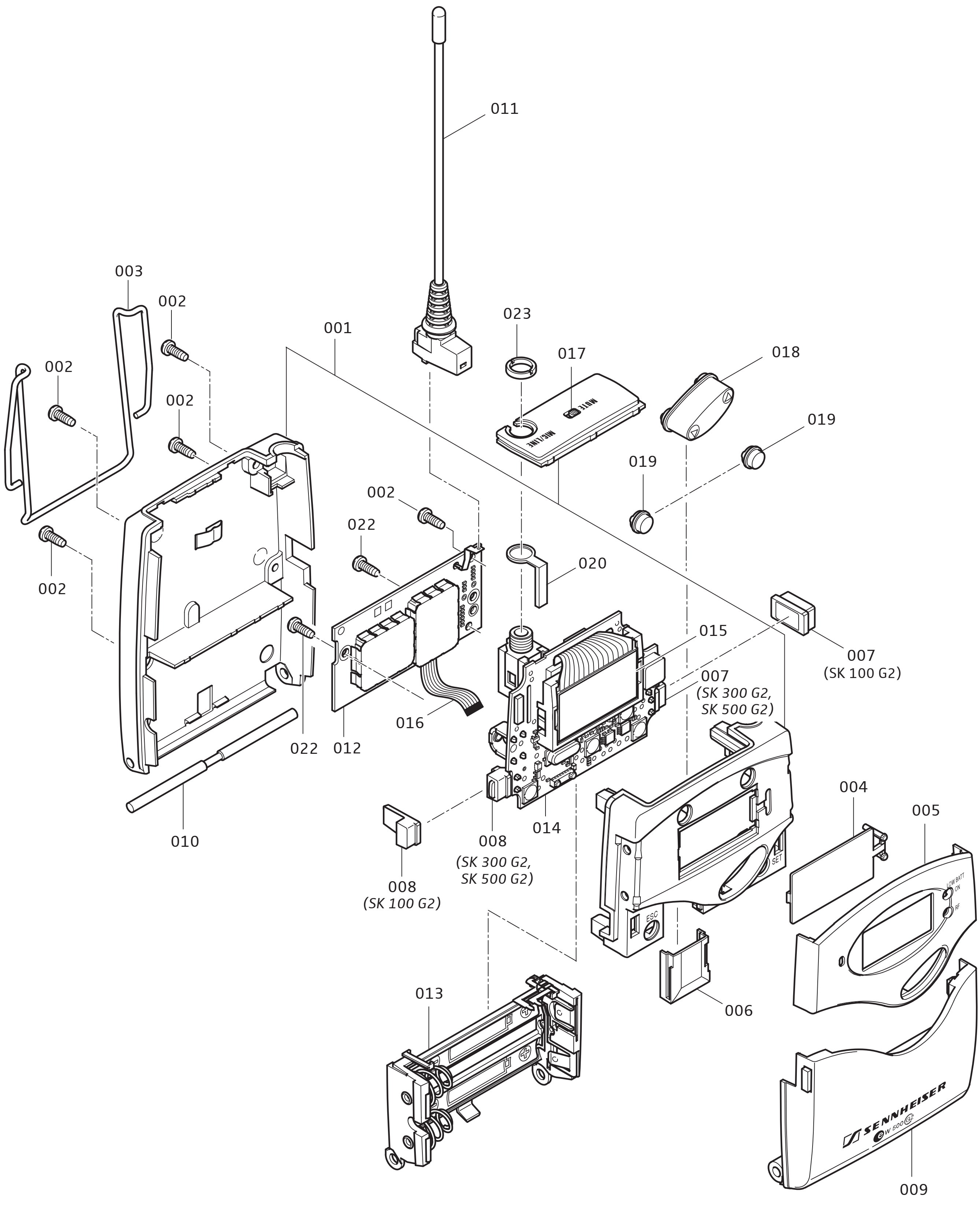
2.2 AF characteristics

Audio input LINE / MIC	jack socket; 3.5mm
AF transmission range	
Microphone	40Hz to 18kHz (±3dB) Japan: 40Hz to 15kHz (±3dB)
Line	80Hz to 18kHz (±3dB) Japan: 80Hz to 15kHz (±3dB)
AF sensitivity levels	0 to -30dB (also refer to input level on page 11)
Compander system	Sennheiser HDX
Preemphasis	HDX-dependent
Input impedance	
Microphone	≥10kW
Line	≥ 1MW; parallel 470pF, guitar-optimised
Total harmonic distortion (at nominal deviation, 1kHz)	≤0.9%
Signal-to-noise ratio (referring to peak deviation)	110dB(A) via HDX system
Max. input voltage (peak deviation)	
Microphone	1.8Veff (unw)
Line	2.4Veff

2.3 RF characteristics

Modulation	Wideband FM, F8W
Number of transmission frequencies (tunable in steps of 25kHz)	1440
Frequency ranges in MHz	518-554
	626-662
	740-776
	774-810 (Japan)
	786-822
	834-870
Number of frequency banks with preset channels (presets)	
SK 100 G2	8 banks with 4 channels each
SK 300 G2	8 banks with 8 channels each
SK 500 G2	8 banks with max. 20 channels
Freely adjustable frequency bank (tunable in steps of 25kHz)	
SK 100 G2	1 bank, 4 tunable channels
SK 300 G2	1 bank, 8 tunable channels
SK 500 G2	1 bank, 20 tunable channels
Switching bandwidth	≤36MHz
Harmonic emissions	≤1µW
Spurious wave emissions	
in the range from 47MHz to 862MHz	≤4nW
all other frequencies < 1GHz	≤250nW
Channel grid	n x 25kHz
Frequency stability within temperature range	≤±10kHz
Intermodulation distance (±400 kHz) at antenna distance ^{3}10cm	≥36dB
Nominal deviation	±24kHz
Peak deviation (at 1kHz)	±48kHz / Japan: <±40kHz
RF transmitting power max. at 50W	30mW, +0.8dB/-3dB
	Japan: 10mW, +0.8dB/-3dB
Covered bandwidth according to ETSI	
at -20dBc	140kHz
at -60dBc	200kHz
Pilot tone	
Frequency	32.766kHz ±7.6Hz
Deviation	2kHz ± 0.5kHz
Carrier signal-to-noise ratio referring to peak deviation within switching bandwidth	75dB(A)$_{eff}$

3 Exploded view



Pos	Description
001	Housing complete
002	Lens screw
003	Clamp
004	Cover, LCD
005	Cover, LOW BAT
006	Cover, infrared
007	SK 100 G2: plug right SK 300 G2 / SK 500 G2: double charging contact
008	SK 100 G2: plug left SK 300 G2 / SK 500 G2: single charging contact
009	Battery cover
010	Axle
011	Antenna
012	PCB RF
013	Battery case
014	PCB mainboard
015	LC display complet
016	Flat cable, 20 pin
017	Slide button, black
018	Rocker switch, black
019	Knob
020	Shielding cup
021	Label
022	Lens screw
023	Slottet nut

4 Test and alignment instructions

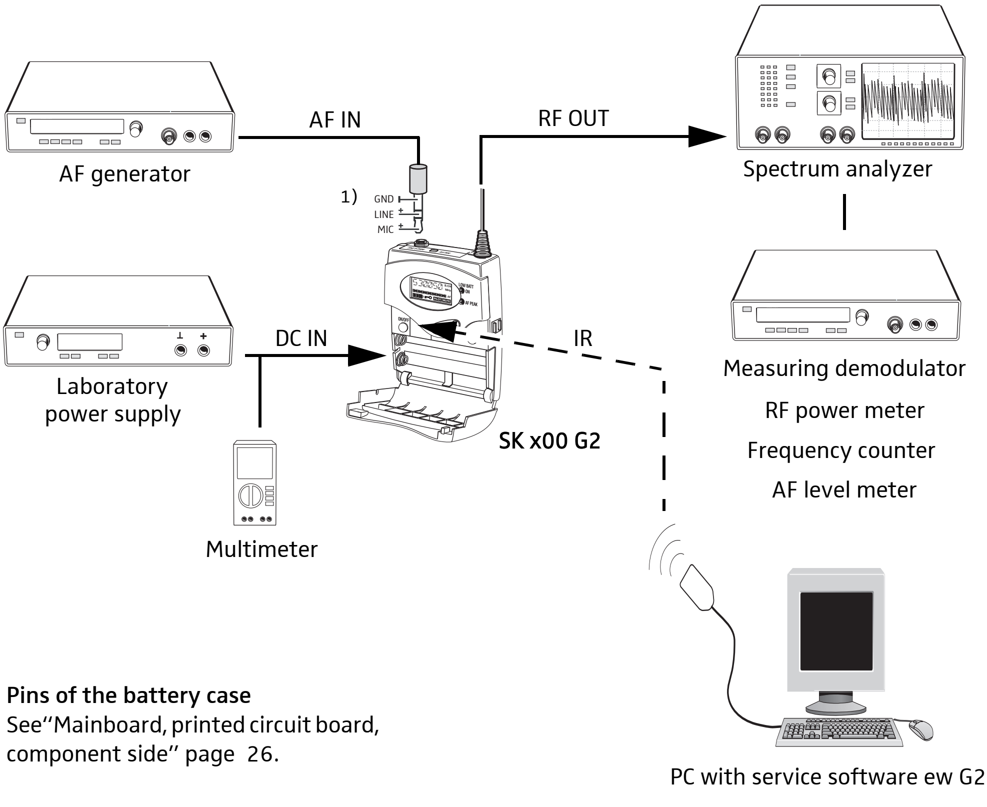
4.1 Measuring and test equipment

- 1 Spectrum analyzer (up to at least 3GHz)
- 1 AF signal generator
- 1 Multimeter
- 1 Laboratory power supply
- 1 AF level meter
- 1 RF power meter
- 1 RF measuring demodulator
- 1 Frequency counter
- 1 PC with service software ew G2)

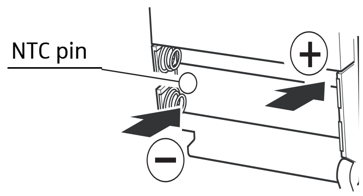
Reference

Read out / modified the unit data via infrared adaptor. See also chapter ''Reading out / Changing of device data via infrared adaptor'' on page 15.

4.2 Measuring set-up



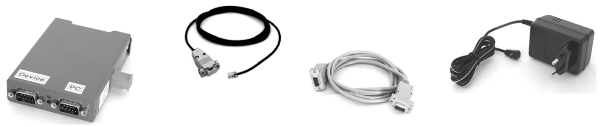
Pins of the battery case
See''Mainboard, printed circuit board, component side'' page 26.



1) **Note:** AF IN: Ground modification of the phone jack:
- If you feed in the MIC signal you have to ground the LINE connector of the phone jack
- If you feed in the LINE signal you have to ground the MIC connector of the phone jack.

4.3 Special service tools

Service set for service software ew G2 (Part-No. 094739)





Infrared adaptor

Verwendung im Kapitel:
''Reading out / Changing of device data via infrared adaptor'' on page 15

4.4 Test table

Se-quence	Type of measure-ment/adjustment	Signal input	Device settings	Mesuring point/ test point	Required value	Remarks
1	**Visual inspection**					
1.1	MIC/LINE jack socket	–	–	–	–	Contacts are not twisted, no hairline cracks at the solder points, no mechanical damage
1.2	MUTE slide control	–	–	–	–	See 1.1
1.3	▲ / ▼ button (S204 /S206), SET button (S202), ON/OFF (S208) button	–	–	–	Buttons on motherboard spring back	See 1.1
1.4	Battery compartments	–	–	–	–	See 1.1
1.5	Charging contacts (not SK 100 G2)	–	–	–	–	See 1.1
1.6	Antenna contacts to RF PCB	–	–	–	–	See 1.1
1.7	Flat ribbon cables and terminal strips	–	–	–	–	No mechanical damage, locked
2	**Motherboard: current and voltage measurement** **Attention** The buttons S204, S206, S202, and S208 on the motherboard may be damaged, if you press them using sharp-edged flat or pointed objects (e.g. the tip of a ballpoint pen). Only use objects with end-rounded tips that will not damage the buttons.					
2.1	Current consumption when transmitter is switched off	–	„POWER“ = OFF	Connected in series to BK+ battery contact See page 26	≤220µA; typ. 180µA	Current limita-tion of labora-tory power supply unit: ION = 300mA
2.2	Current consumption when in operation	Supply +2.4V_{DC} via battery contacts	„POWER“ = ON; (press button for approx 3 seconds)	See 2.1	≤170mA	LC display is switched off. Test points see page 26
2.3	Rated voltage	See 2.2	See 2.2	BK+ / BK-	+2.4V_{DC}	–
2.4	Operating voltage	See 2.2	See 2.2 See page 26	BK+ / BK-	+1.8V_{DC} to +3.1V_{DC}	–
2.5	DC to DC converter voltage	See 2.2	See 2.2	TP224/ GND	+5,3V_{DC} to +5,7V_{DC}	–
2.6	**Switch-on/switch-off thresholds**					
2.6.1	Switch-on threshold when powered by battery	See 2.2	See 2.2	See 2.5	+1.8V_{DC}	
2.6.2	Switch-on threshold when powered by accupack	See 2.2; SK OFF: Connect the NTC contact to ground via isolated wire, then switch on SK again: See page 26	See 2.2	See 2.5	+2.2V_{DC}	–
2.6.3	Switch-off threshold when powered by battery	See 2.2	See 2.2	See 2.5	+1.8V_{DC}	LED LOW BAT has to flash
2.6.4	Switch-off threshold when powered by accupack	See 2.6.2	See 2.2	See 2.5	+2.0V_{DC}	LED LOW BAT has to flash

Se-quence	Type of measure-ment/adjustment	Signal input	Device settings	Mesuring point/ test point	Required value	Remarks
3	**RF module** See "Measuring set-up" page 10.					
	Removing the RF module: 1. Loosen the lens-head screw on the RF PCB (see exploded view, pos. 22). 2. Remove the RF module (maintain the motherboard connection via flat ribbon cable). **Re-establishing the ground connection between RF module and motherboard:** Connect the M6 point on the component side of the RF PCB and the P4 point on the component side of the motherboard. For this purpose, solder a stranded wire with a length of 10cm between the points M6 and P4.					
3.1	Supply voltage RF PCB	Supply +2.4 V_{DC} via battery contacts	„POWER" = ON; (press button for approx. 3 seconds)	RF module TP72/GND	+5.1V_{DC} to +5.35V_{DC}	See page 27
3.2	Transmission frequency	See 3.1	Pilot = „OFF" Mute = Aus	Without antenna at TP8/ direkt ground GND	Transmission frequency = receive frequency ±10kHz	See 3.4 Avoiding measuring errors
3.3	**Measuring / balancing the PLL voltage** **Attention** The buttons S204, S206, S202, and S208 on the motherboard may be damaged, if you press them using sharp-edged or pointed objects (e.g. the tip of a ballpoint pen). Only use objects with end-rounded tips that will not damage the buttons.					
3.3.1	Centre range limit	See 3.1	Use „TUNE" to set the centre transmission frequency	TP3	+2.5V_{DC} to +2.9V_{DC}	Balancing via C114
3.3.2	Lowest range limit	See 3.1	Use „TUNE" to set the lowest transmission frequency	TP3	+0.9V_{DC} to +2.3V_{DC}	Balancing via C114
3.3.3	Uppermost range limit	See 3.1	Use „TUNE" to set the uppermost transmission frequency	TP3	+2.9V_{DC} to +4.2V_{DC}	Balancing via C114
3.4	**Measuring / balancing the RF output power** **How to avoid measuring errors:** 1. Desolder the antenna before starting the measurement. 2. Measure against a direct ground point on TP8. 3. Only use shielded measuring lines with an impedance of 50O and a length of 50cm.					
3.4.1	Mean RF output power	See 3.1	Spectrum analyser or power measuring device; set centre transmission frequency **(ft=fm)**	Without antenna to TP8 / direct ground GND; Japan: J200 test socket	15mW to 38mW / 12dBm to 15.8dBm Japan: 5mW to 10mW / 7dBm to 10dBm	–
3.4.2	Highest RF output power	See 3.1	Spectrum analyser or power measuring device; set highest transmission frequency **(ft=fh)**			
3.4.3	Lowest RF output power	See 3.1	Spectrum analyser or power measuring device; set lowest transmission frequency **(ft=fl)**			
3.5	Nominal deviation LINE	AF generator at jack socket (1kHz, 270mV)	Set „SENSIT" to -10dB	See 3.4.1	< ±24kHz	Pay attention to the pin assignment of the jack socket: See "Measu-ring set-up" page 10.
3.6	Peak deviation LINE	AF generator at jack socket (1kHz, 1.08V)	Set „SENSIT" to -10dB	See 3.4.1	< ±4kHz Japan: ±40kHz	
3.7	S/N ratio referring to peak deviation	24kHz Mod: OFF	AF level meter MUTE= „ON"	See 3.4.1	≤ 60dB(A)$_{eff}$	–
3.8	THD at nominal deviation	See 3.4	AF level meter THD measuring Mod: ON	See 3.4.1	0.08% to 1.2%	–

3.9	Noise voltage distance	Supply +2.4VDC via battery contacts	AF level meter; Mod: OFF	See 3.4.1	$\geq$40 $dB_{unw.peak}$	Tap on micro-phone, press buttons, touch housing / antenna
3.10	**MIC/LINE input level** **Note** Please pay attention to the pin assignment of the jack socket: See "Measuring set-up" page 10.					
3.10.1	MIC input level at nominal deviation	Supply +2.4VDC via battery contacts; AF generator at MIC/LINE: 1kHz: external filter ON: 20Hz and 20kHz 680mV 170mV 42mV 18mV	AF level meter PILOT „OFF" Set „SENSIT" to - 30dB - 20dB -10dB 0dB	See 3.4.1	±24kHz	–
3.10.2	LINE input level at nominal deviation	See 3.9.1; 2100mV 700mV 270mV 120mV	AF level meter PILOT „OFF" Set „SENSIT" ti - 30 dB - 20 dB -10 dB 0 dB	See 3.4.1	±24kHz	–
4	**Measuring the pilot tone**					
4.1	Pilot tone frequency	Supply +2.4V_{DC} via battery contacts	AF level meter Pilot tone: „ON"	See 3.4.1	32.766kHz ± 7.6Hz	–
5	**Display module** **Attention** The buttons S204, S206, S202, and S208 on the motherboard may be damaged, if you press them using sharp-edged or pointed objects (e.g. the tip of a ballpoint pen). Only use objects with end-rounded tips that will not damage the buttons.					
5.1	Visual inspection of all display elements	Supply +2.4V_{DC} via battery contacts	„POWER" = ON; (press button for approx. 3 seconds)	–	–	–
5.2	Checking of automatic display deactivation	See 5.1	See 5.1	–	Backlighting switches off after approx. 15 seconds	–
5.3	Display Battery status Number of bars: 0 Number of bars: 1 Number of bars: 2 Number of bars: 3	See 5.1 1.8V_{DC} to 2.0V_{DC} 2.0V_{DC} to2.3V_{DC} 2.3V_{DC} to 2.6V_{DC} 2.6V_{DC} to 3.0V_{DC}	See 5.1	–	 0 bars 1 bar 2 bars 3 bars	– Low battery 30 % 70 % 100 %
5.4	Display key-lock	See 5.1	See 5.1; Use „SET" to activate the key-lock	–	Key symbol is displayed	–
5.5	Display „PILOT"	See 5.1	See 5.1 Use „SET" to activate the pilot tone	–	PILOT symbol ist displayed	
5.6	Display „MUTE"	See 5.1	See 5.1; Press „MUTE" button	–	MUTE symbol is displayed	
5.7	Display of audio level	See 5.1 AF signal to MIC/LINE	See 5.1	–	AF display	
5.8	AF display at nominal deviation	See 3.5 Mod: ON	–	All	AF display = „0"	
5.9	AF display at peak deviation	See 3.6 Mod: ON	–	All	AF display = full deflection; yellow "PEAK" LED is on.	

4.5 Reading out / Changing of device data via infrared adaptor

4.5.1 Overview

You may read out and change data via the infrared adaptor. The Sennheiser service software supports the following tasks you may want to perform:

- Reading out the current software version and, if necessary, carrying out of a software update (file "*.s19").
- Commissioning the receiver after a hardware replacement (e. g. replacing of a board).
- Changing the current frequency table.
- Changing / resetting the receivers's factory settings.

4.5.2 Required hardware

You will need the Sennheiser service package for reading in and out of device data
(“See “Special service tools” page 11.“):

For portable devices:
- Infrared adaptor for reading out / in data (e. g. SK 100 transmitter)

For stationary devices:
- RS232/RS485 converter with mains adaptor
- RS232 cable for connection of PC and converter
- RS485 cable for connection of receiver and converter

You may order the service package directly from Sennheiser:
Service package for ew G2 software, ID no. 094739, price group 161

4.5.3 Required software

You may download the service software free of charge from the Sennheiser homepage on the Internet.

In order for you to use the software, you will need the operating system Microsoft® Windows 98™ or higher and a free COM port (RS232).

4.5.4 Information on the service software

Operating instructions for the service software are available in PDF format. These operating instructions contain information on commissioning of the service package and reading out and in of device data.

After installation of the software, you will find the instruction manual in the Windows menu [Start].

4.5.5 Commissioning after replacing a board

After you have fitted a new board into the device, you have to write the new data (e. g. a new frequency table) to the device.

Requirements

- You have replaced the defective board (e. g. the RF board of the transmitter/receiver),
- You have installed and launched the service software.

Writing of device data

Perform the following steps:

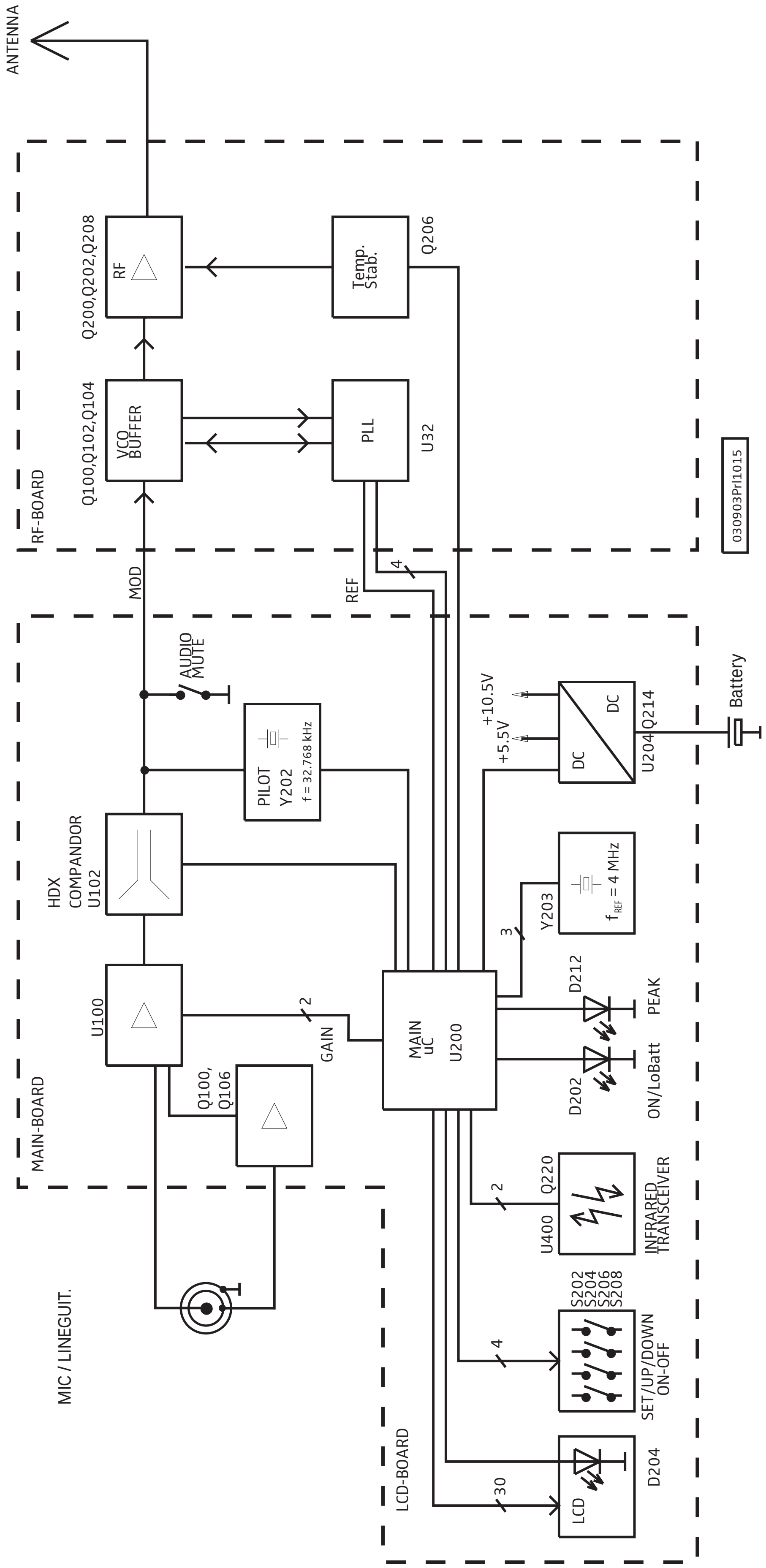
1. Put the infrared adaptor of the service set in front of the transmitter.
2. Connected the transmitter to the power supply (2.4V_{DC})
3. Switch on the transmitter.
4. Start the service software
5. Click the [Auto Detect] button.
   Result: Your connected device has been detected.
6. In the "Info" register, click the [EXECUTE ALL] button.
   Result: All device data are read out. If all the data have been read out successfully, the message "Success" is displayed.
   Note: If you perform individual actions in the "Info" or "Service" registers, you have to return the device into the operational status afterwards. For this reason, finally click the [Close Device] button.
7. Go to the "Service" register.
8. Click the [EXECUTE ALL] button.
   Result: The new device data are written. If all the data have been written successfully, the message "Success" is displayed.

Result

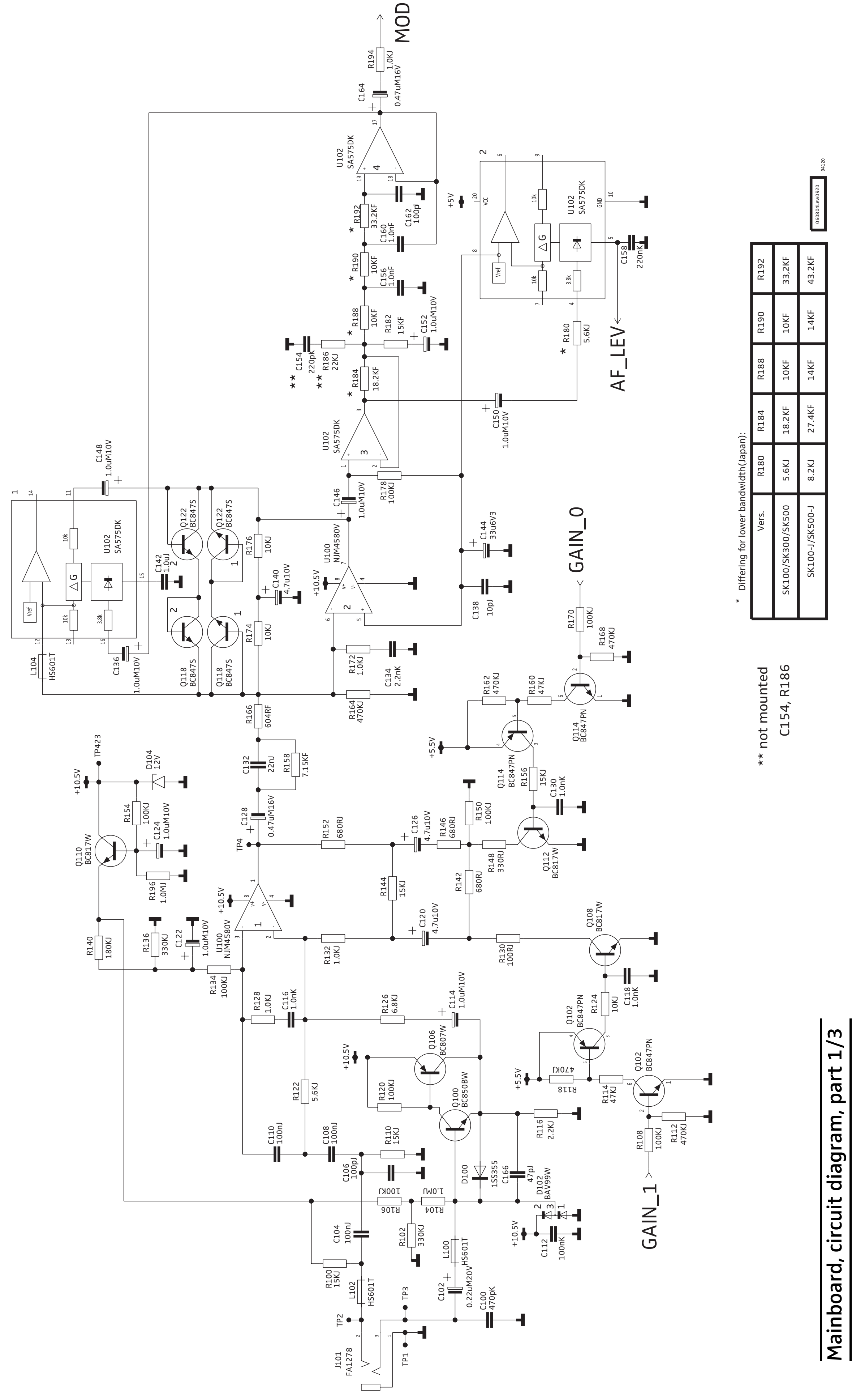
You have successfully written the new data to the device. These new data now correspond to the new factory settings for you device.
You will find these data in the directory "D:\Sennheiser\ew G2 service pakkage" in the files "Defaults.dat" and "FreqTable.dat" or "FreqTableIEM.dat".

You will find detailed information in the G2 service software's online help. After installation of the software, you will find the online help in the Windows menu [Start].

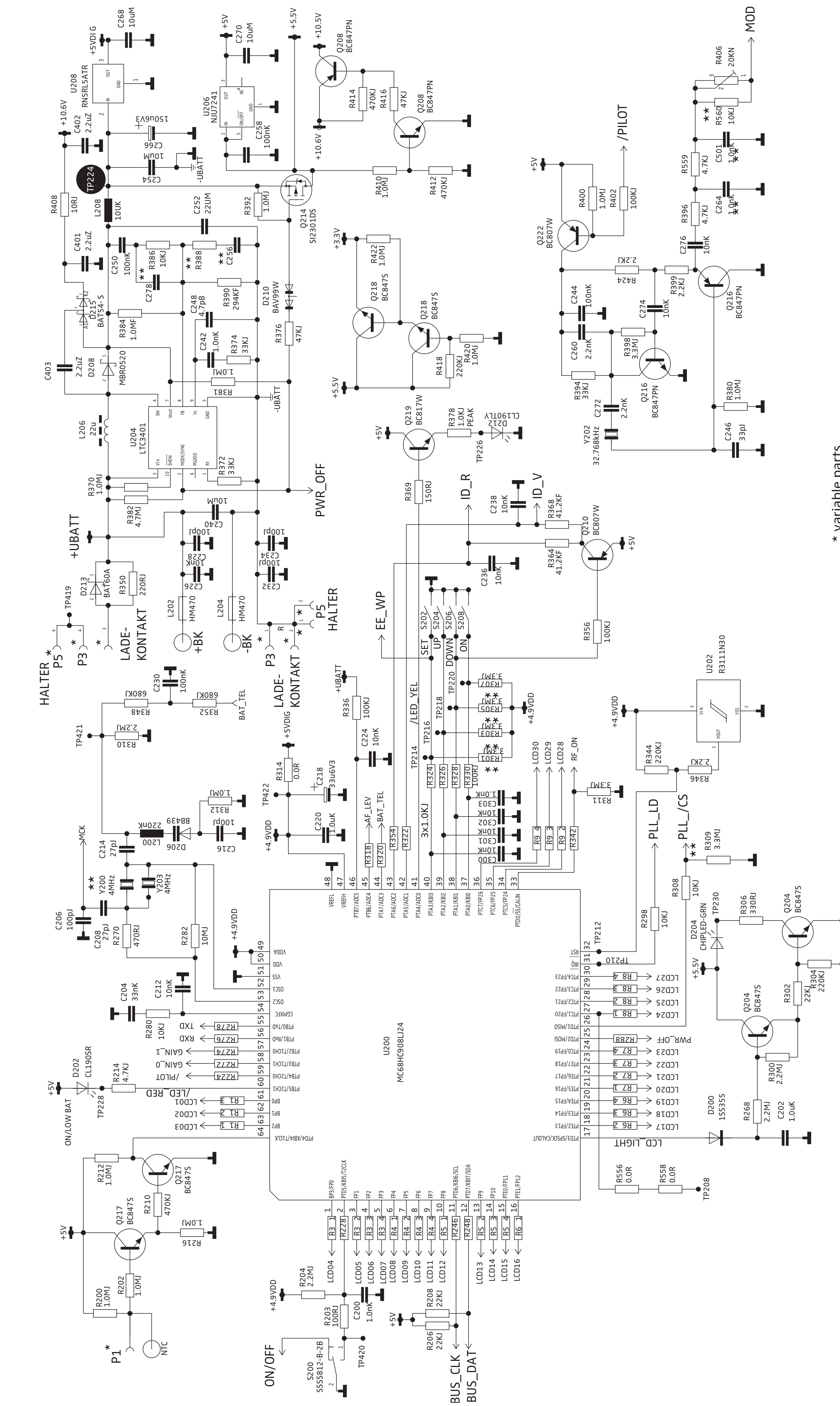
5 Circuit diagrams



Block diagram



Vers.	R180	R184	R188	R190	R192
SK100/SK300/SK500	5.6KJ	18.2KF	10KF	10KF	33,2KF
SK100-J/SK500-J	8.2KJ	27.4KF	14KF	14KF	43.2KF



	P1	P3	P5
SK100 SK100-J	n.m.	n.m.	89533
SK300/500 SK300/500-J	m.	89576	n.m.

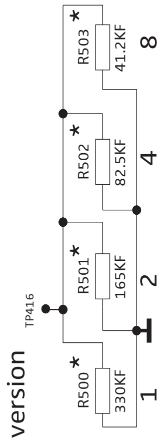
* variable parts

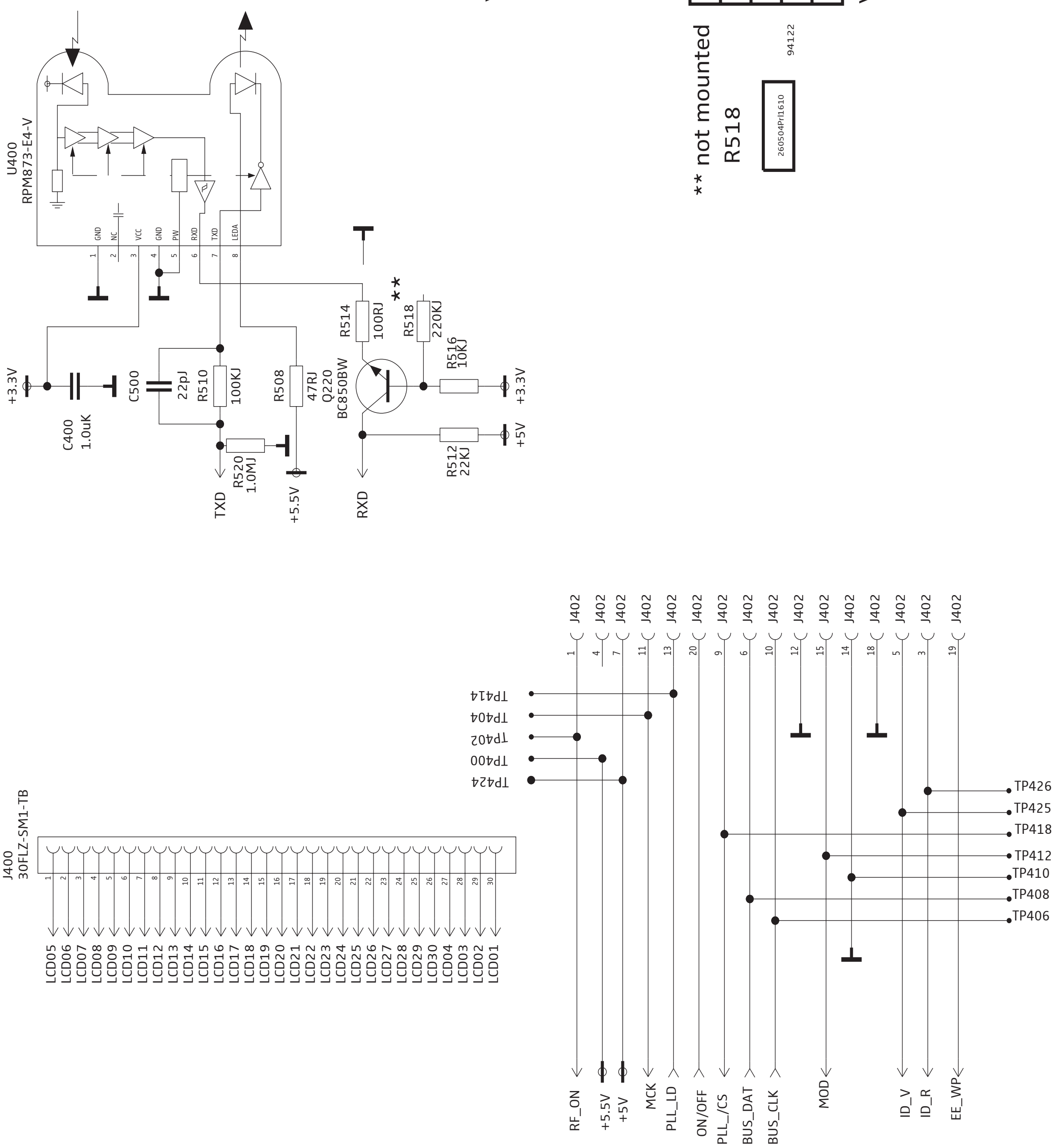
**	not mounted
C256 C264 C278 C501 R301 R303 R305 R307 R309 R388 R560 Y200	

061204Lew1230 94121

Mainboard, circuit diagram, part 2/3

Mainboard, circuit diagram, part 3/3





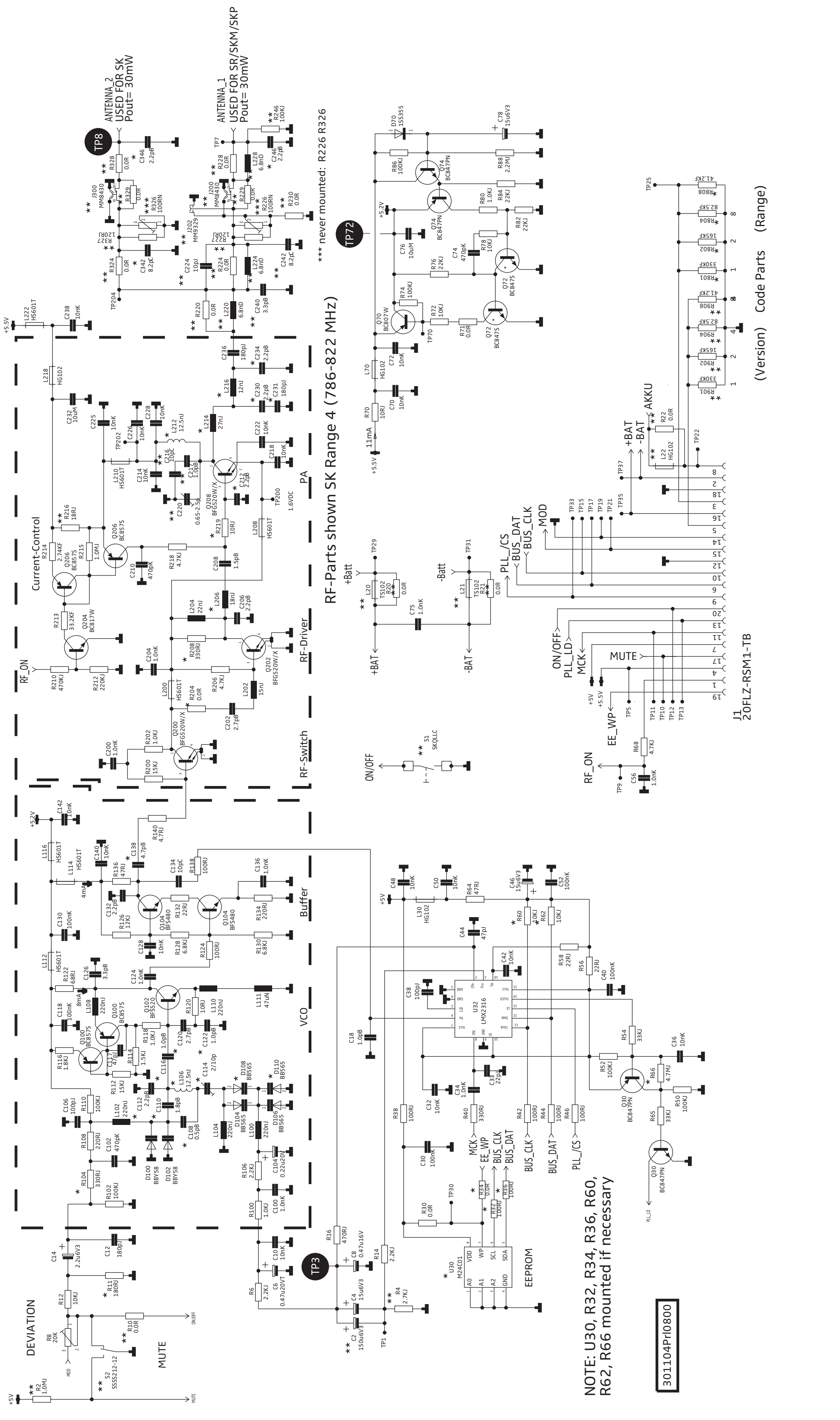
*	R500	R501	R502	R503
SK100	n.m.	n.m.	n.m.	n.m.
SK100-J	m.	m.	n.m.	n.m.
SK300/500	n.m.	n.m.	n.m.	n.m.
SK300/500-J	n.m.	n.m.	m.	n.m.

version code is only in use for -J

** not mounted
R518

260504PrI1610

94122



RF board, circuit diagram, part 1/2

* COMPONENTS SK DIFFERING IN FREQUENCY RANGES

		VCO										BUFFER		DRIVER					POWER-AMP						CODE PARTS			
RANGE	Freq. (MHz)	R11	R104	C108	C110	C112	C114	C116	C120	C122	D108	D110	L106	C138	R204	R208	L206	R219	C212	L212	L214	C230	C231	L216	C234	R801	R802	R804	R808
1	518-554	270R	330R	-	4p7	2p7	10p	2p7	6p8	3p9	BB565	BB565	18n5	4p7	0R	330R	33n	47R	2p2	18n5	47n	5p6	180p	22n	3p3	X	-	-	-
2	626-662	220R	330R	-	3p3	1p0	10p	2p2	5p6	2p2	-	BB565	18n5	4p7	0R	330R	33n	33R	2p2	12n5	39n	3p9	180p	18n	3p3	-	X	-	-
3	740-776	220R	330R	-	2p2	-	10p	1p5	4p7	1p5	-	-	18n5	4p7	0R	330R	18n	22R	2p2	12n5	33n	2p7	180p	15n	3p3	X	X	-	-
4	786-822	180R	330R	-	1p8	-	10p	1p0	2p7	1p0	BB565	BB565	12n5	4p7	0R	330R	18n	10R	2p2	12n5	27n	2p2	180p	12n	2p2	-	-	X	-
5	830-866	180R	330R	-	1p8	-	10p	1p0	2p7	1p0	BB565	BB565	12n5	4p7	0R	330R	18n	10R	2p2	12n5	22n	2p7	180p	8n2	2p7	X	-	X	-
6(J)	774-810	180R	330R	-	1p8	-	20p	1p0	2p7	1p0	BB565	BB565	12n5	4p7	0R	330R	18n	10R	2p2	12n5	27n	2p2	180p	12n	2p2	-	X	X	-
7	902-918	180R	330R	-	1p8	-	3p	1p0	2p7	1p0	BB565	BB565	12n5	4p7	0R	330R	18n	10R	2p2	8n0	18n	1p8	180p	8n2	2p2	X	X	X	-
8	556-592	220R	330R	-	3p9	1p5	10p	2p2	6p8	3p9	BB565	BB565	18n5	4p7	0R	330R	33n	47R	2p2	18n5	39n	5p6	180p	18n	3p3				X
9	576-612	220R	330R	-	2p7	-	10p	2p7	6p8	3p9	BB565	BB565	18n5	4p7	0R	330R	33n	33R	2p2	18n5	33n	4p7	180p	18n	3p3	X			X
10	670-706	220R	330R	-	2p2	-	10p	1p5	4p7	1p5	-	-	18n5	4p7	0R	330R	18n	22R	2p2	12n5	33n	2p7	180p	15n	3p3		X		X
11	696-732	220R	330R	-	2p2	-	10p	1p5	4p7	1p5	-	-	18n5	4p7	0R	330R	18n	22R	2p2	12n5	33n	2p7	180p	15n	3p3	X	X		X

** COMPONENTS SK/SR/SKM/SKP DIFFERING FOR VARIANTS AND FREQUENCY RANGES

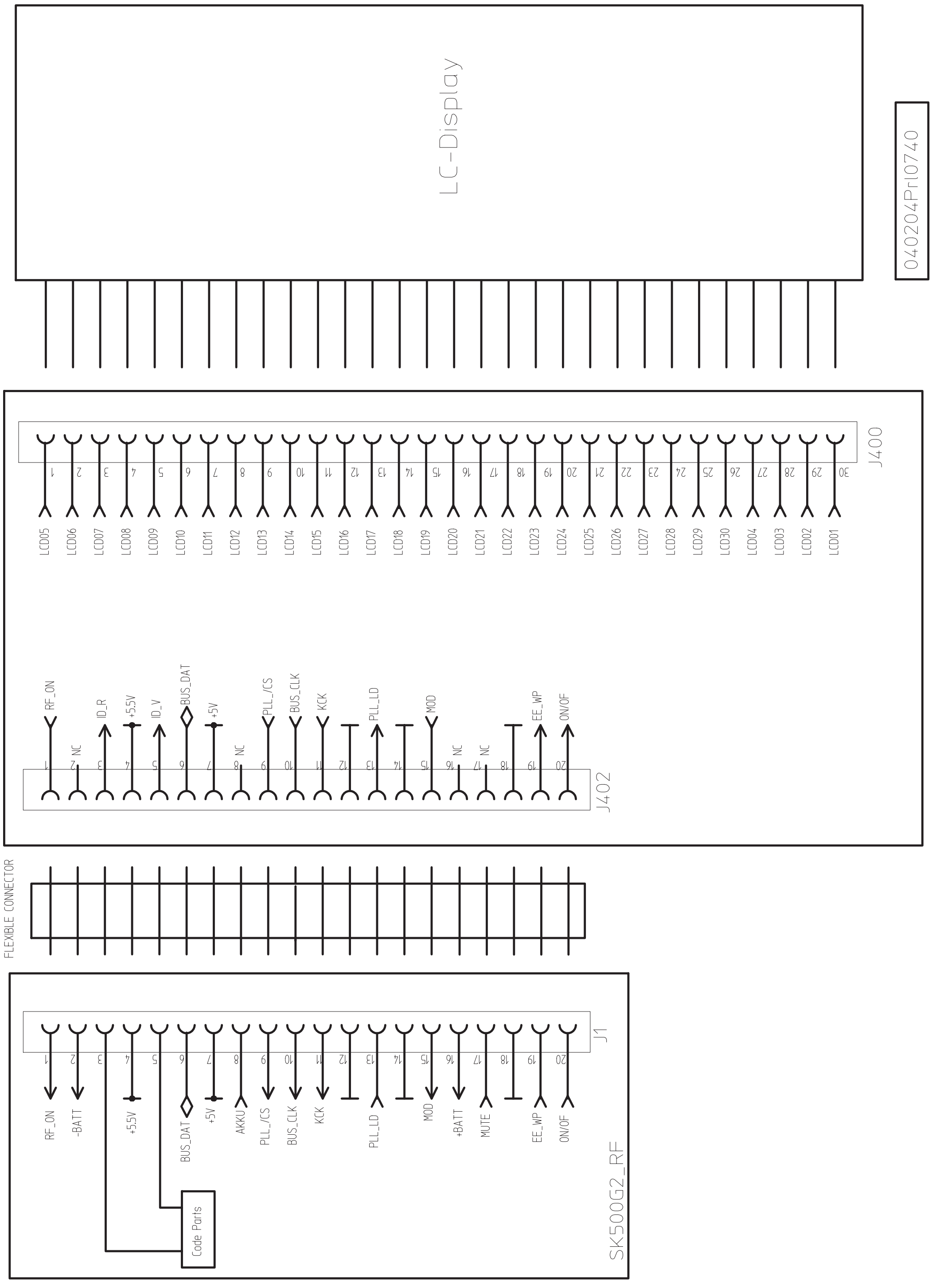
			CODE PARTS																															
	RANGE	Freq. (MHz)	S1	S2	C2	R2	R4	R10	L20 R20	L21 R21	L22 R22	C216	C217	C220	R216	R220 L220	C224 R224 L224	R227	C240	C242	R228 L228	R229	R230	J200	J202	R324	R327	R328	R329	R246	J300	R901	R902	R904	R908	NUT M6
Version SK	1	518-554	-	-	-	-	1K5	0R	-	-	-	18p	6p8	-	18R	6n8	-	-	3p3	-	-	-	-	-	-	0R	-	0R	0R	-	-	X	-	-	-	-
	2	626-662	-	-	-	-	2K7	0R	-	-	-	18p	4p7	-	18R	6n8	-	-	3p3	-	-	-	-	-	-	0R	-	0R	0R	-	-	X	-	-	-	-
	3	740-776	-	--	-		2K7	0R	-	-	-	10p	3p3	-	18R	6n8	-	-	3p3	-	-	-	-	-	-	0R	-	0R	0R	-	-	X	-	-	-	-
	4	786-822	-	-	-	-	2K7	0R	-	-	-	10p	1p0	-	18R	6n8	-	-	3p3	-	-	-	-	-	-	0R	-	0R	0R	-	-	X	-	-	-	-
	5	830-866	-	-	-	-	2K2	0R	-	-	-	10p	2p7	-	18R	6n8	-	-	3p3	-	-	-	-	-	-	0R	-	0R	0R	-	-	X	-	-	-	-
	6(J)	774-810	-	-	-	-	2K7	0R	-	-	-	10p	1p0	-	18R	6n8	-	-	3p3	-	-	-	-	-	-	0R	33R	0R	-	-	X	-	X	-	-	-
	7	902-918	-	-	-	-	2K7	0R	-	-	-	-	-	-	18R	6n8	-	-	3p3	-	-	-	-	-	-	0R	-	0R	0R	-	-	X	-	-	-	-

X = MOUNTED
-= NOT MOUNTED

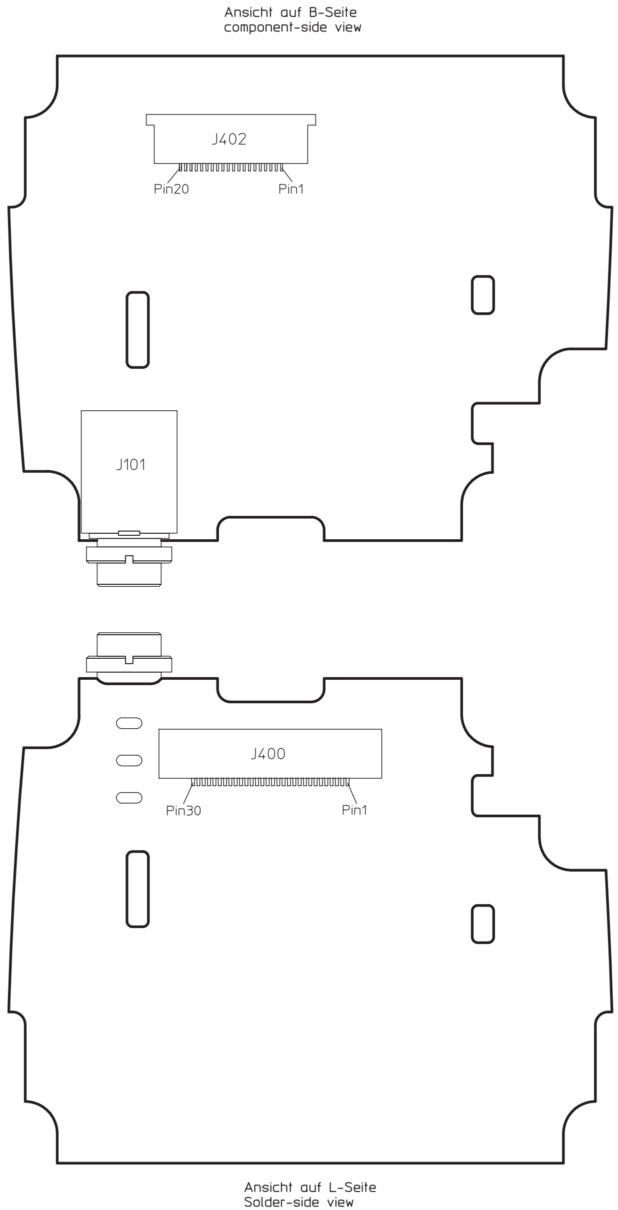
NOTE:
U30 R32 R34 R36 R60 R62 R66 R226 R326 C246 C342 C346 mounted if necessary

280105PrI1315 not used

RF board, circuit diagram, part 2/2



Mainboard, interconnector assignment, part 1/2



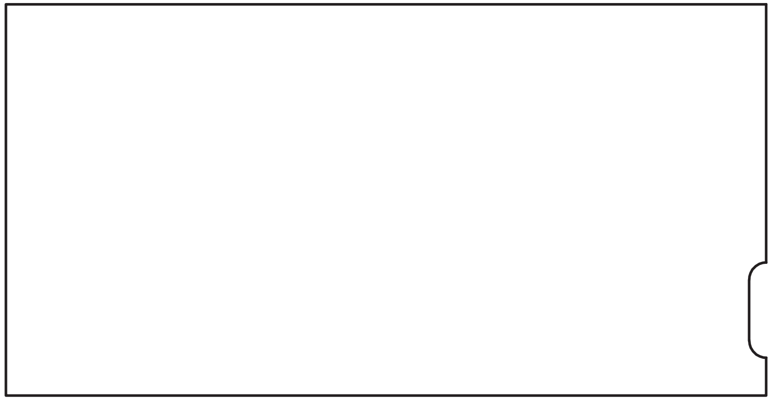
Mainboard, interconnector assignment, part 2/2

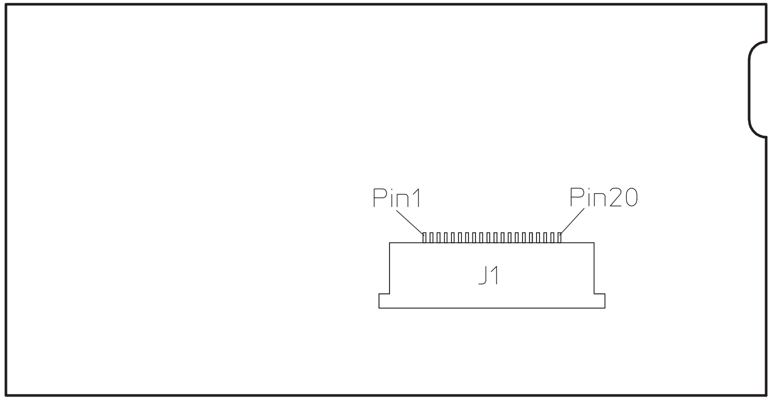
Pin Assignment J101			
Pin	Signal	Direction	Level
1	⊥		
2	MIC_IN	I	max. 3V
3	GIT_IN	I	max. 3V

Pin Assignment J402			
Pin	Signal	Direction	Level
1	RF_ON	O	
2	NC		
3	ID_R	I	
4	+5.5V	O	+5.5V
5	ID_V	I	
6	BUS_DAT	I/O	
7	+5V	O	+5V
8	NC		
9	PLL_/CS	O	
10	BUS_CLK	O	
11	MCK	O	
12	⊥		
13	PLL_LD	I	
14	⊥		
15	MOD	O	
16	NC		
17	NC		
18	⊥		
19	EE_WP	I	
20	ON/OFF		

Pin Assignment J400			
Pin	Signal	Direction	Level
1	LCD05		
2	LCD06		
3	LCD07		
4	LCD08		
5	LCD09		
6	LCD10		
7	LCD11		
8	LCD12		
9	LCD13		
10	LCD14		
11	LCD15		
12	LCD16		
13	LCD17		
14	LCD18		
15	LCD19		
16	LCD20		
17	LCD21		
18	LCD22		
19	LCD23		
20	LCD24		
20	LCD25		
22	LCD26		
23	LCD27		
24	LCD28		
25	LCD29		
26	LCD30		
27	LCD04		
28	LCD03		
29	LCD02		
30	LCD01		

Ansicht auf B-Seite
component-side view

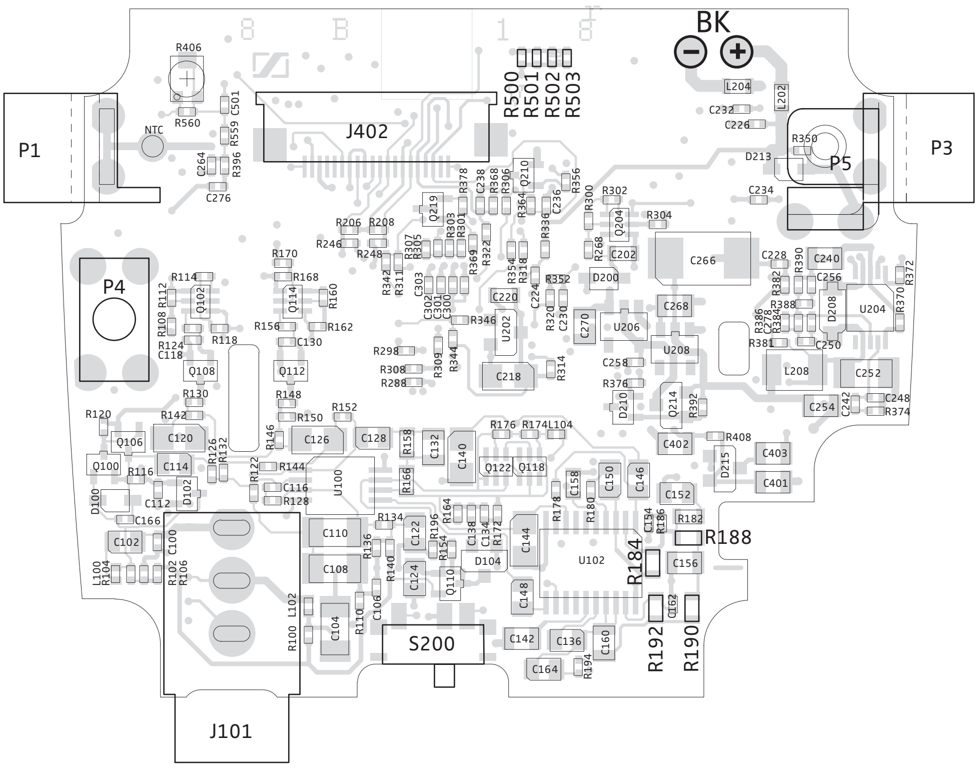




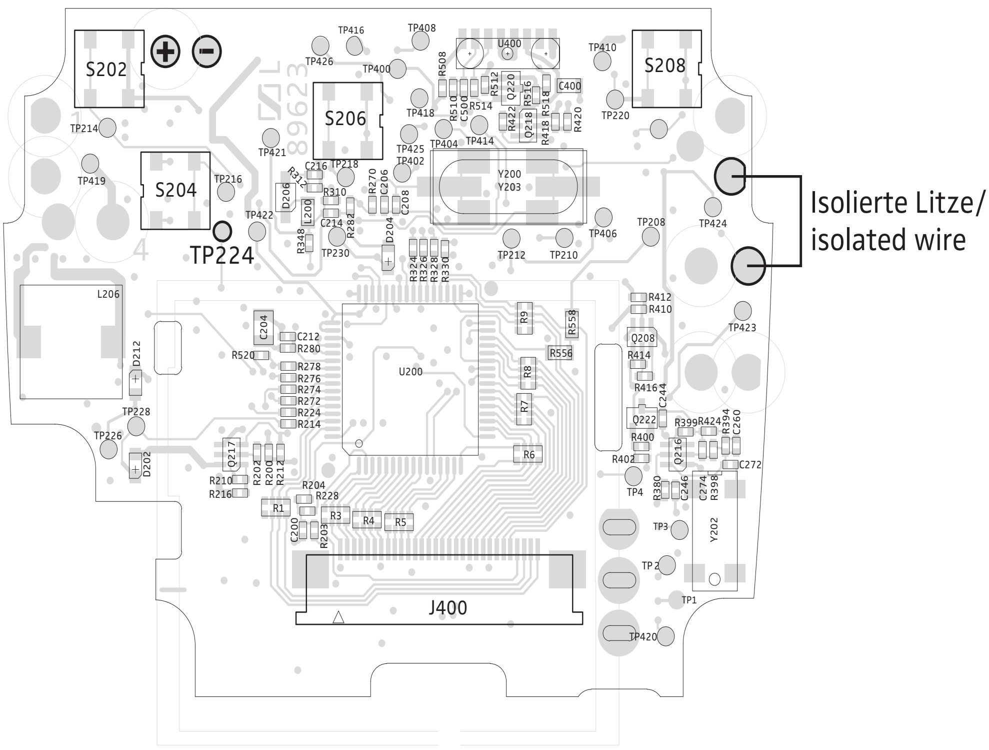
Ansicht auf L-Seite
solder-side view

Pin Assignment				
Connector	Pin	Signal	Direction	Level
J1	1	RF_ON	I	
	2	-BAT	O	
	3	ID RANGE	O	
	4	+5.5V	I	+5.5V
	5	ID VERSION	O	
	6	BUS_DAT	I/O	
	7	+5V	I	+5.0V
	8	AKKU	O	
	9	PLL_/CS	I	
	10	BUS_CLK	I	
	11	MCK	I	
	12	⊥		
	13	PLL_LD	O	
	14	⊥		
	15	MOD	I	
	16	+BAT	O	
	17	MUTE	O	
	18	⊥		
	19	EE_WP	I	
	20	ON/OFF	O	

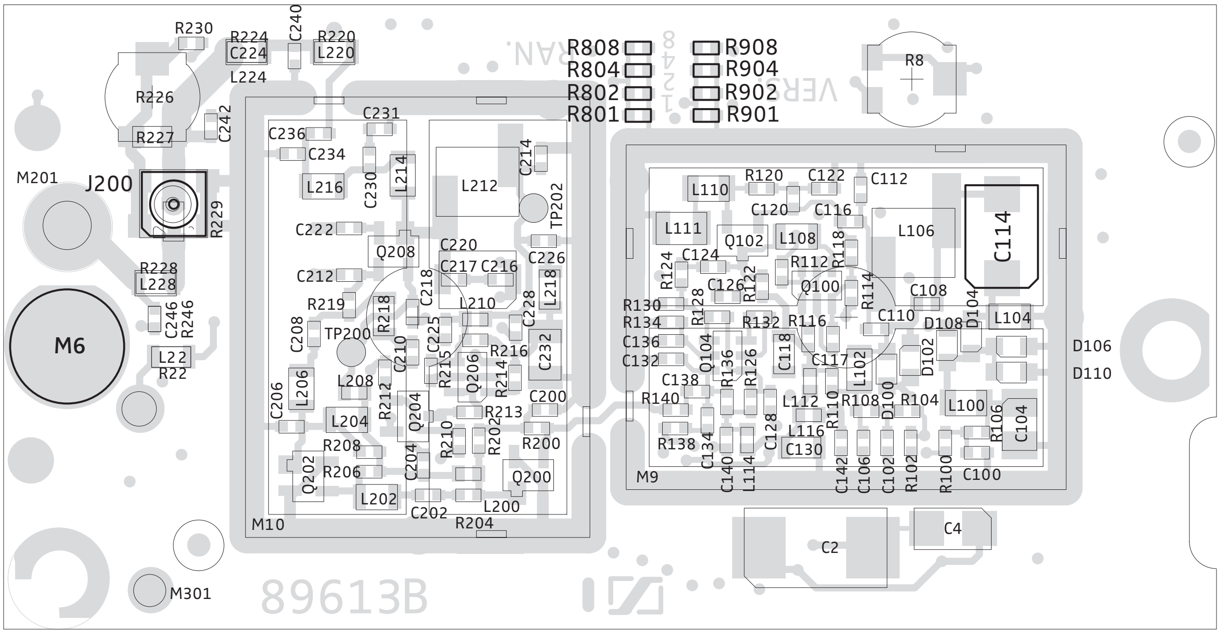
RF board, interconnector assignment



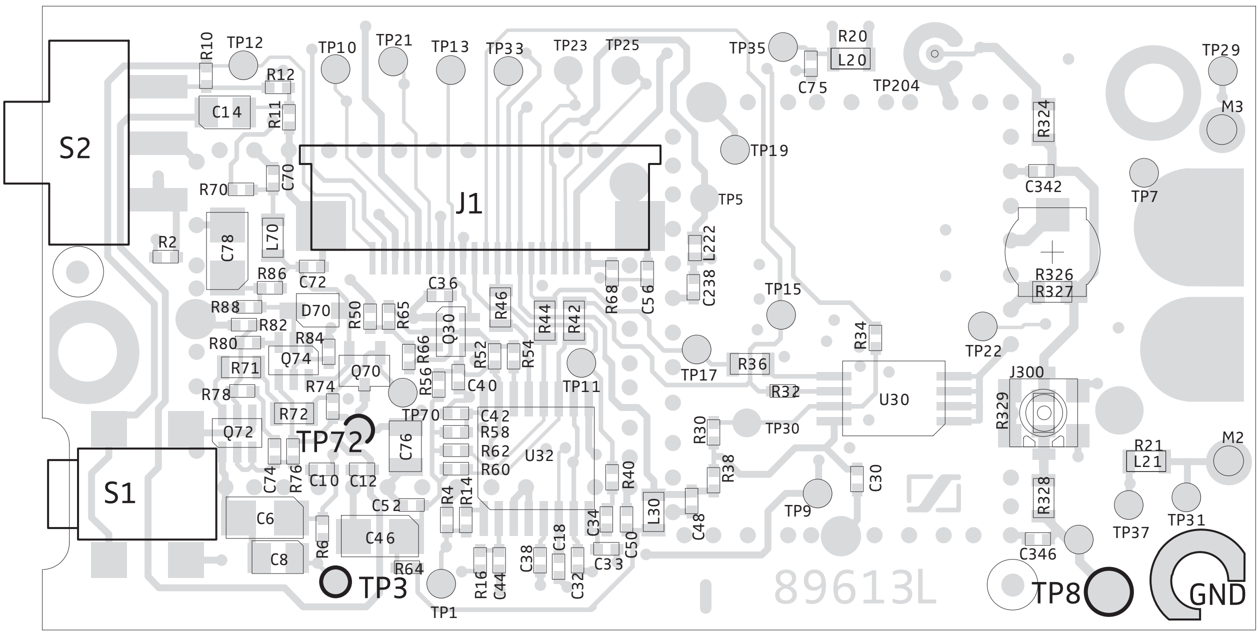
Mainboard, printed circuit board, component side



Mainboard, printed circuit board, solder side



RF board, printed circuit board, component side



RF board, printed circuit board, solder side